

APPARATUS AND METHOD FOR MONITORING SPEAKER CONE DISPLACEMENT IN AN AUDIO SPEAKER

ABSTRACT OF THE DISCLOSURE

An apparatus for monitoring speaker cone displacement in an audio speaker includes: (a) an electromagnetic coil structure; (b) a ferrous core structure; the ferrous core structure and the electromagnetic coil structure being mounted with the speaker to effect variable electromagnetic coupling between the ferrous core structure and the electromagnetic coil structure as the speaker cone moves; (c) a signal injecting circuit coupled with the electromagnetic coil structure for injecting a predetermined input signal into the electromagnetic coil structure; and (d) a signal monitoring circuit coupled with the electromagnetic coil structure; the signal monitoring circuit receiving an output signal from the electromagnetic coil structure and generating an indicating signal based upon the output signal; at least one signal characteristic of the indicating signal being related with the cone displacement.